FIG. 1

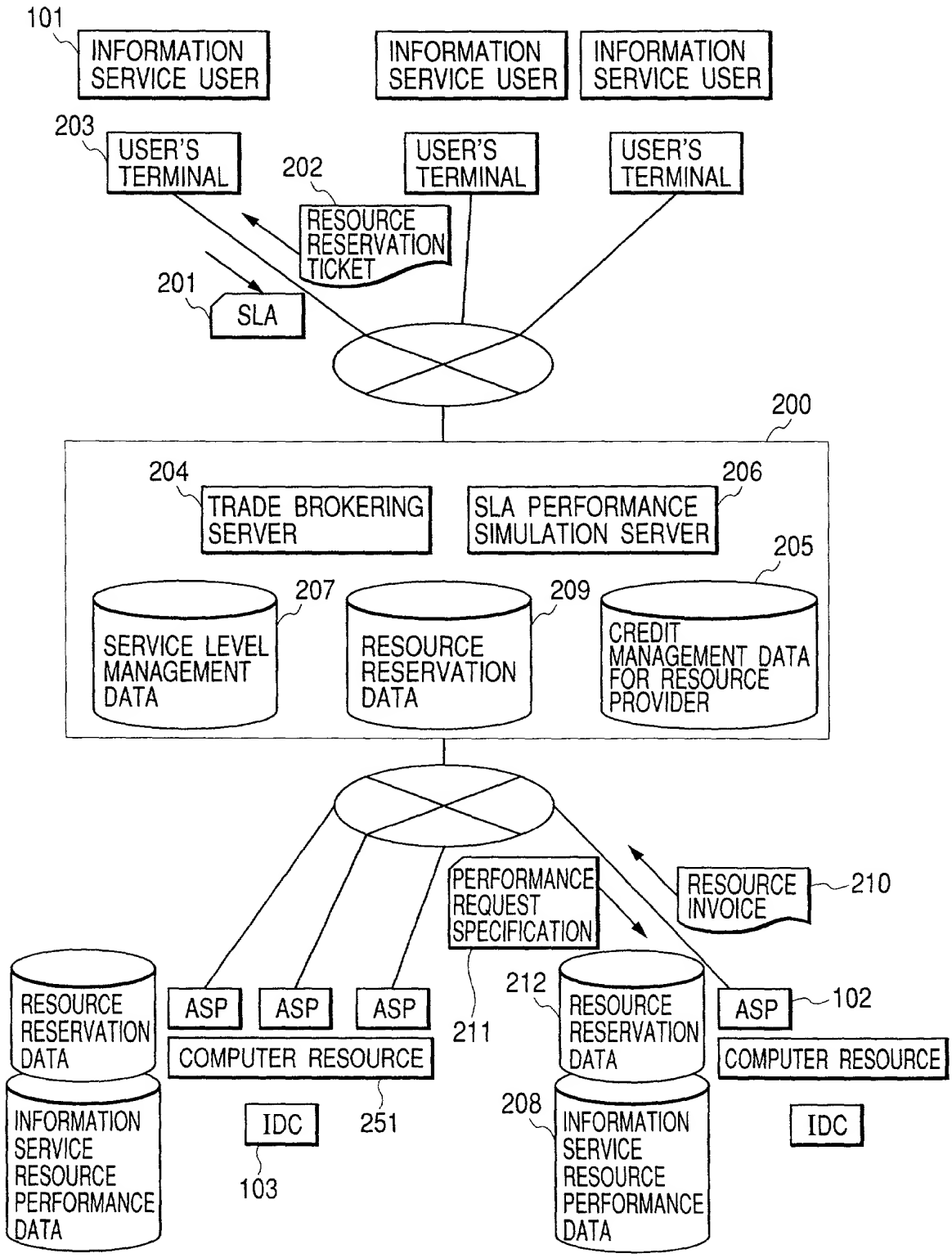

101
INFORMATION SERVICE USER
INFORMATION SERVICE USER
INFORMATION SERVICE USER
203
USER'S TERMINAL
202
USER'S TERMINAL
USER'S TERMINAL
RESOURCE RESERVATION TICKET
201
SLA
200
204
TRADE BROKERING SERVER
206
SLA PERFORMANCE SIMULATION SERVER
205
207
SERVICE LEVEL MANAGEMENT DATA
209
RESOURCE RESERVATION DATA
CREDIT MANAGEMENT DATA FOR RESOURCE PROVIDER
PERFORMANCE REQUEST SPECIFICATION
RESOURCE INVOICE
210
212
RESOURCE RESERVATION DATA
ASP
102
ASP
ASP
ASP
211
COMPUTER RESOURCE
COMPUTER RESOURCE
RESOURCE RESERVATION DATA
208
INFORMATION SERVICE RESOURCE PERFORMANCE DATA
IDC
251
IDC
103
INFORMATION SERVICE RESOURCE PERFORMANCE DATA

FIG. 2

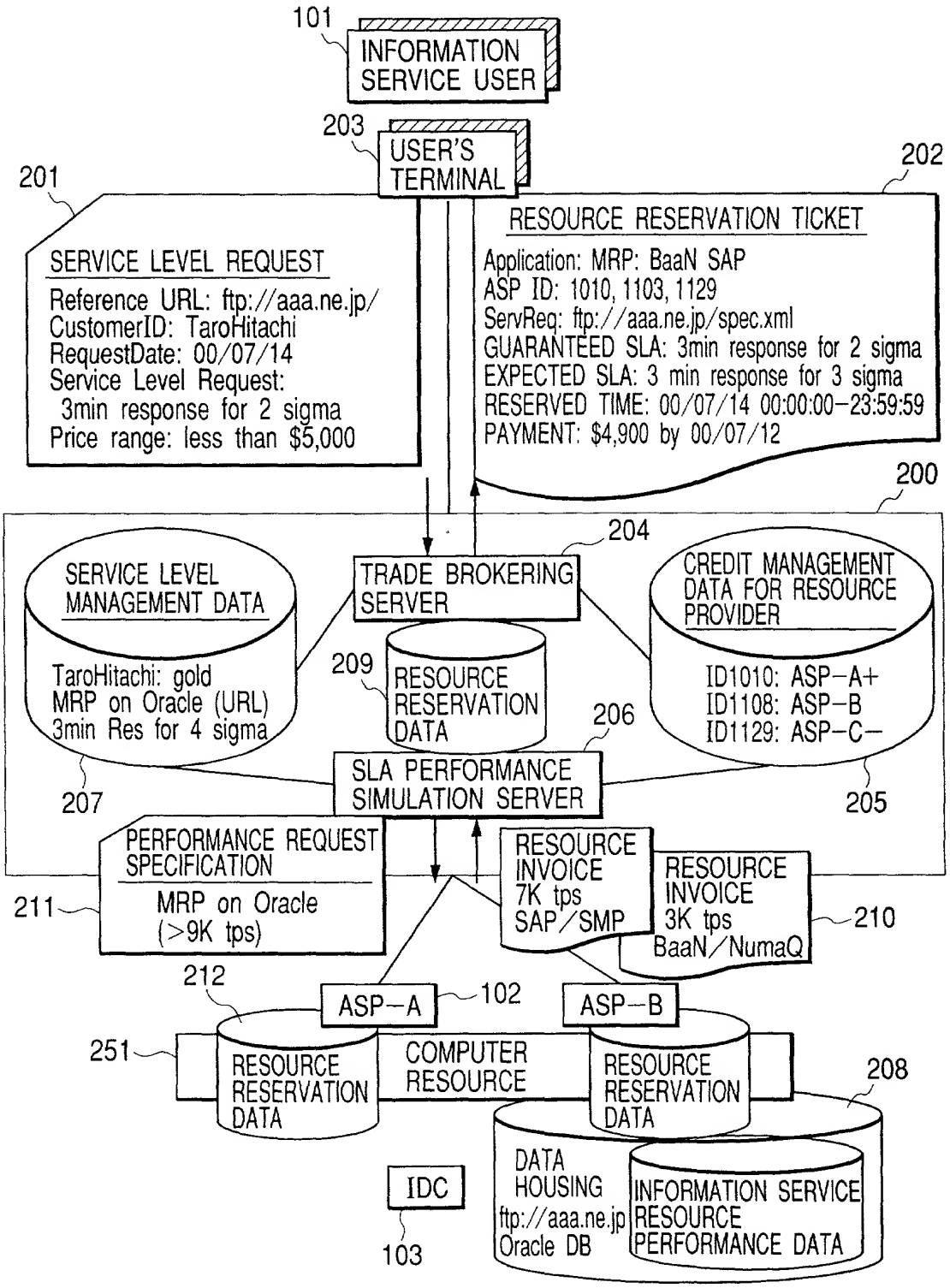

101
INFORMATION SERVICE USER
203
USER'S TERMINAL
202
201
SERVICE LEVEL REQUEST
Reference URL: ftp://aaa.ne.jp/
CustomerID: TaroHitachi
RequestDate: 00/07/14
Service Level Request:
3min response for 2 sigma
Price range: less than $5,000
RESOURCE RESERVATION TICKET
Application: MRP: BaaN SAP
ASP ID: 1010, 1103, 1129
ServReq: ftp://aaa.ne.jp/spec.xml
GUARANTEED SLA: 3min response for 2 sigma
EXPECTED SLA: 3 min response for 3 sigma
RESERVED TIME: 00/07/14 00:00:00-23:59:59
PAYMENT: $4,900 by 00/07/12
200
204
SERVICE LEVEL MANAGEMENT DATA
TaroHitachi: gold
MRP on Oracle (URL)
3min Res for 4 sigma
TRADE BROKERING SERVER
CREDIT MANAGEMENT DATA FOR RESOURCE PROVIDER
ID1010: ASP-A+
ID1108: ASP-B
ID1129: ASP-C-
209
RESOURCE RESERVATION DATA
206
SLA PERFORMANCE SIMULATION SERVER
207
205
PERFORMANCE REQUEST SPECIFICATION
MRP on Oracle
(>9K tps)
211
RESOURCE INVOICE
7K tps
SAP/SMP
RESOURCE INVOICE
3K tps
BaaN/NumaQ
210
212
ASP-A
102
ASP-B
251
RESOURCE RESERVATION DATA
COMPUTER RESOURCE
RESOURCE RESERVATION DATA
208
IDC
103
DATA HOUSING
ftp://aaa.ne.jp
Oracle DB
INFORMATION SERVICE RESOURCE PERFORMANCE DATA

FIG. 3

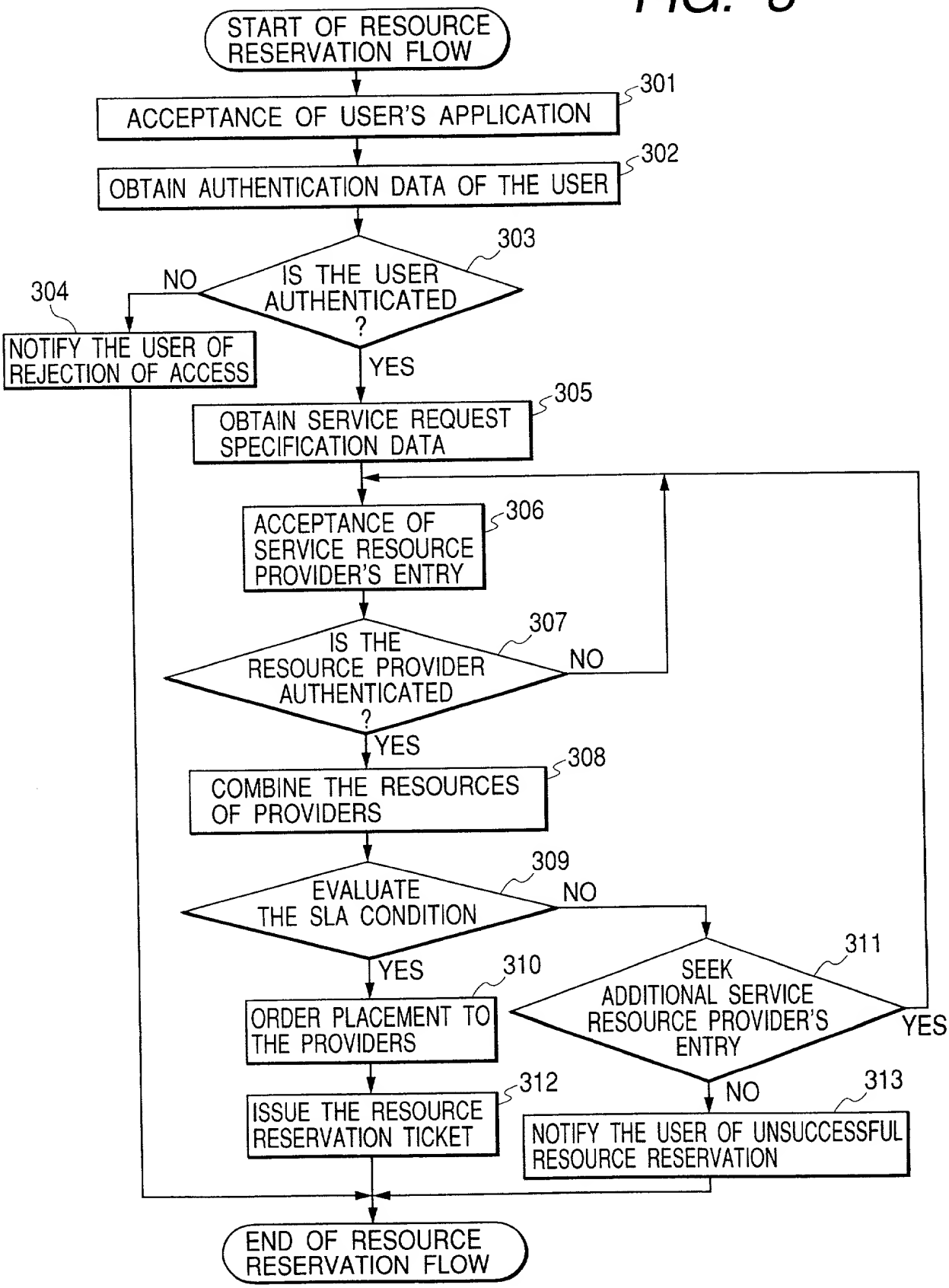

START OF RESOURCE RESERVATION FLOW
ACCEPTANCE OF USER'S APPLICATION
301
OBTAIN AUTHENTICATION DATA OF THE USER
302
IS THE USER AUTHENTICATED ?
303
NO
304
NOTIFY THE USER OF REJECTION OF ACCESS
YES
OBTAIN SERVICE REQUEST SPECIFICATION DATA
305
ACCEPTANCE OF SERVICE RESOURCE PROVIDER'S ENTRY
306
IS THE RESOURCE PROVIDER AUTHENTICATED ?
307
NO
YES
COMBINE THE RESOURCES OF PROVIDERS
308
EVALUATE THE SLA CONDITION
309
NO
YES
ORDER PLACEMENT TO THE PROVIDERS
310
SEEK ADDITIONAL SERVICE RESOURCE PROVIDER'S ENTRY
311
YES
NO
ISSUE THE RESOURCE RESERVATION TICKET
312
NOTIFY THE USER OF UNSUCCESSFUL RESOURCE RESERVATION
313
END OF RESOURCE RESERVATION FLOW

FIG. 4

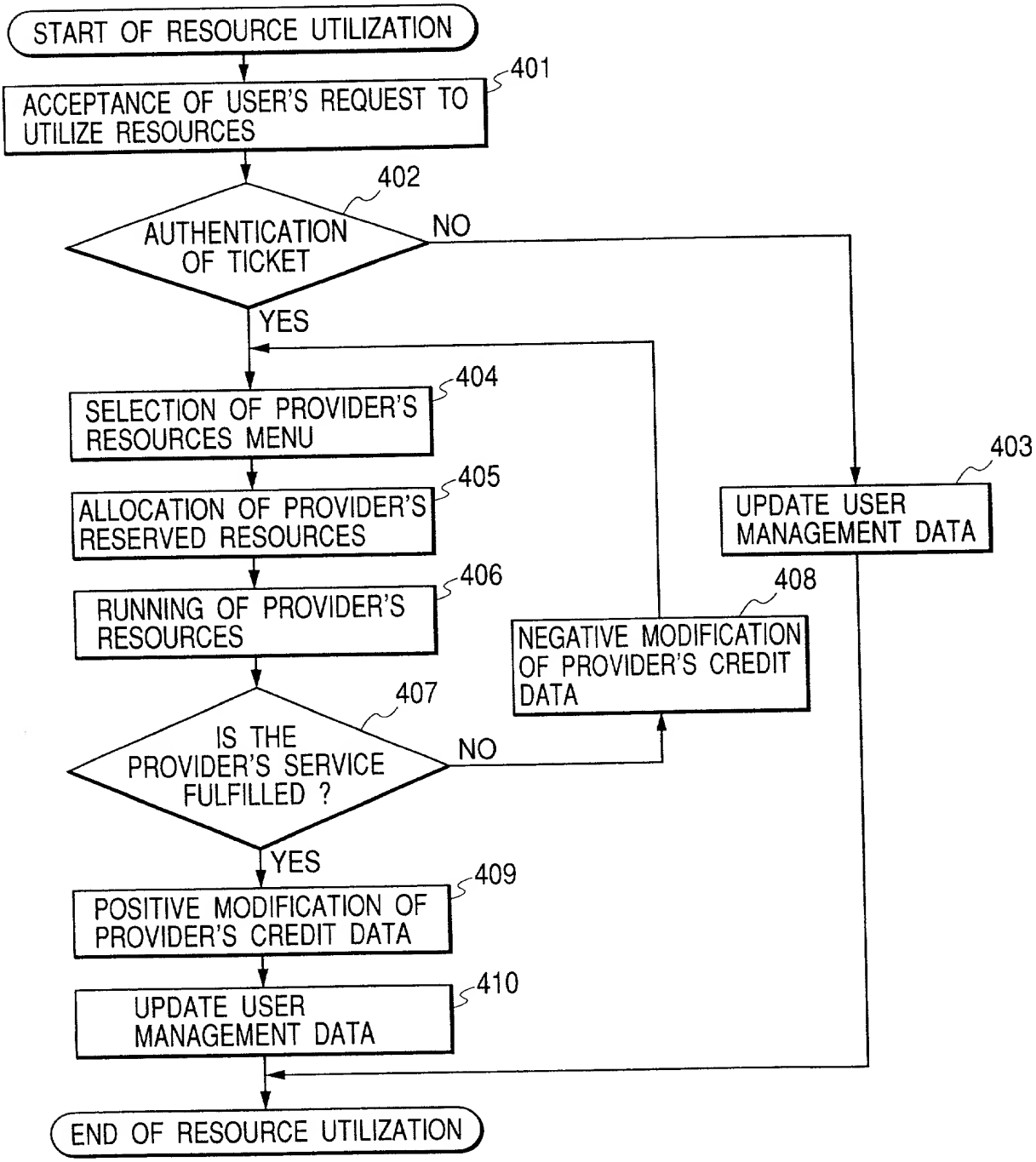

START OF RESOURCE UTILIZATION
401
ACCEPTANCE OF USER'S REQUEST TO UTILIZE RESOURCES
402
AUTHENTICATION OF TICKET
NO
YES
404
SELECTION OF PROVIDER'S RESOURCES MENU
405
ALLOCATION OF PROVIDER'S RESERVED RESOURCES
406
RUNNING OF PROVIDER'S RESOURCES
407
IS THE PROVIDER'S SERVICE FULFILLED ?
NO
YES
408
NEGATIVE MODIFICATION OF PROVIDER'S CREDIT DATA
403
UPDATE USER MANAGEMENT DATA
409
POSITIVE MODIFICATION OF PROVIDER'S CREDIT DATA
410
UPDATE USER MANAGEMENT DATA
END OF RESOURCE UTILIZATION

FIG. 5

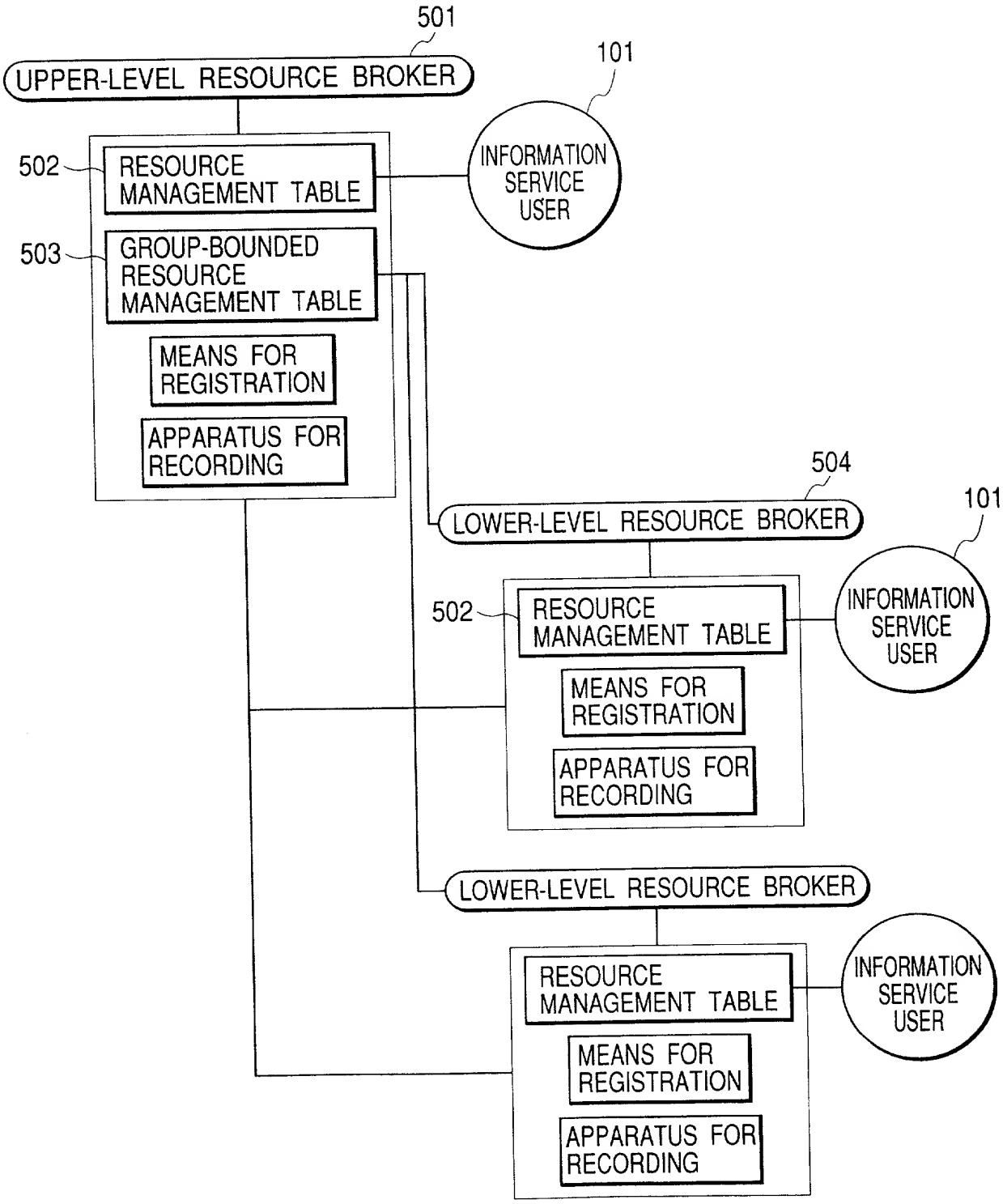

501
UPPER-LEVEL RESOURCE BROKER
101
INFORMATION SERVICE USER
502
RESOURCE MANAGEMENT TABLE
503
GROUP-BOUNDED RESOURCE MANAGEMENT TABLE
MEANS FOR REGISTRATION
APPARATUS FOR RECORDING
504
LOWER-LEVEL RESOURCE BROKER
101
INFORMATION SERVICE USER
502
RESOURCE MANAGEMENT TABLE
MEANS FOR REGISTRATION
APPARATUS FOR RECORDING
LOWER-LEVEL RESOURCE BROKER
INFORMATION SERVICE USER
RESOURCE MANAGEMENT TABLE
MEANS FOR REGISTRATION
APPARATUS FOR RECORDING

FIG. 6

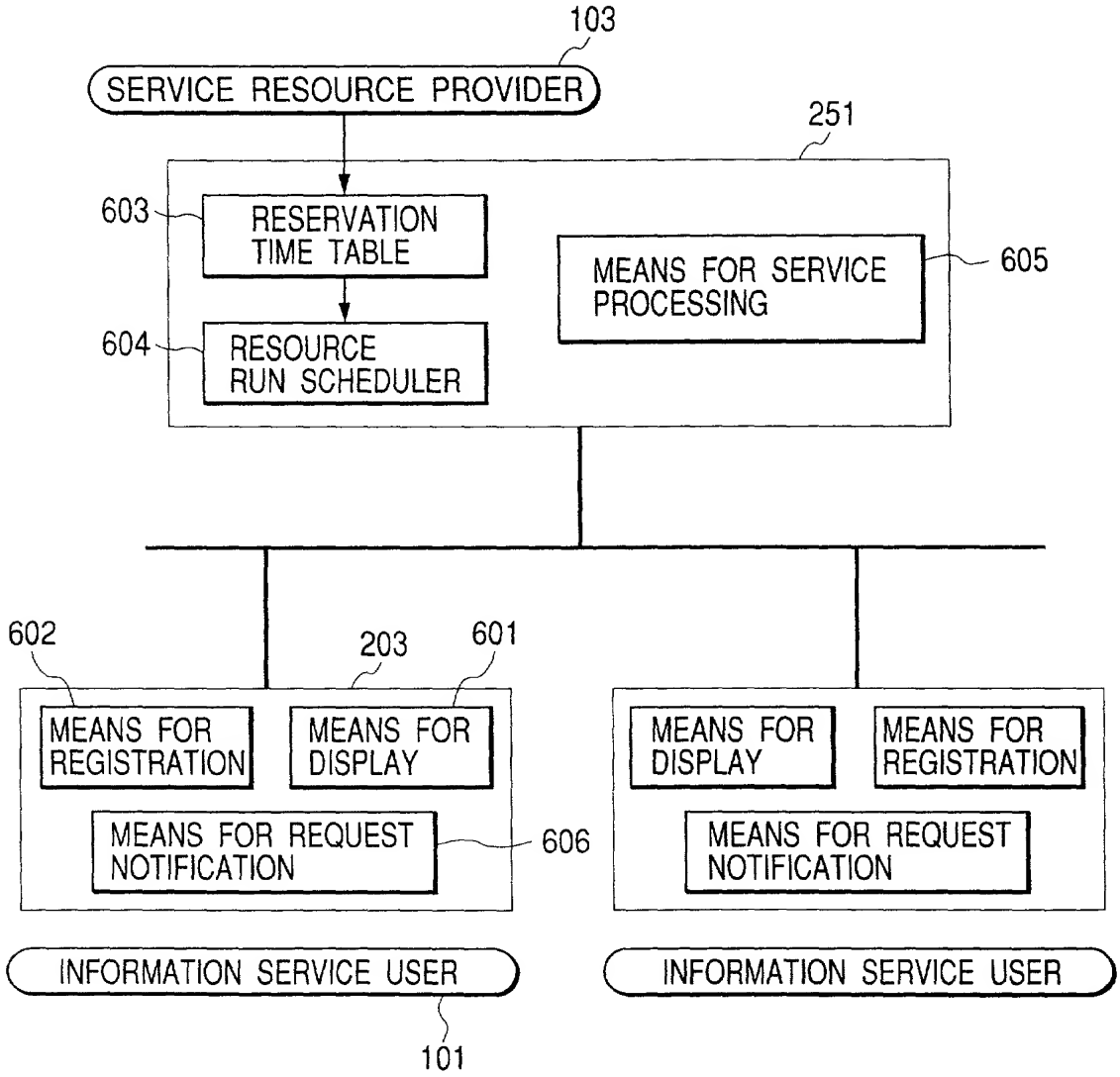

103
SERVICE RESOURCE PROVIDER
251
603
RESERVATION TIME TABLE
604
RESOURCE RUN SCHEDULER
MEANS FOR SERVICE PROCESSING
605
602
203
601
MEANS FOR REGISTRATION
MEANS FOR DISPLAY
MEANS FOR REQUEST NOTIFICATION
606
MEANS FOR DISPLAY
MEANS FOR REGISTRATION
MEANS FOR REQUEST NOTIFICATION
INFORMATION SERVICE USER
INFORMATION SERVICE USER
101

FIG. 7A

701

SERVICE LIST	RESERVED SCHEDULE	RESERVED CAPACITY	REQUESTED PERFORMANCE	NOTIFICATION METHOD
1. ERP/MRP	yy/mm/dd/hh/mm/	4000	~3sec.	BROADCAST
2. ERP/PDM	yy/mm/dd/hh/mm/	1000	~30sec.	MAIL
3. ERP/SCM	yy/mm/dd/hh/mm/	500	~10sec.	BULLETIN BOARD
. . .	. . .			

FIG. 7B

702

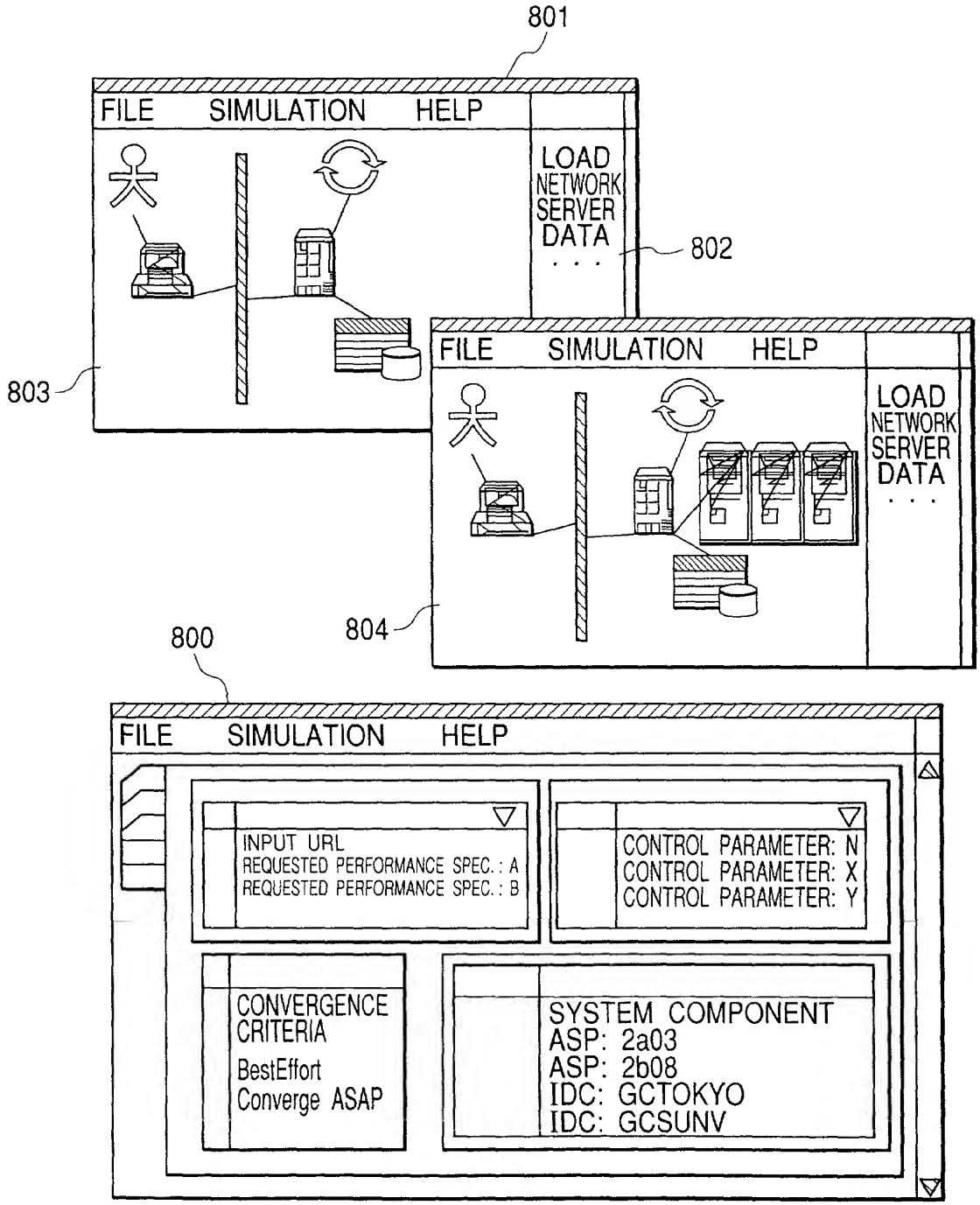
SERVICE LIST	EXECUTION TIME	PERFORMED CAPACITY	EVALUATED PERFORMANCE	SCORE NOTIFICATION
1. ERP/MRP	yy/mm/dd/hh/mm/	4000	~3sec.	+−
2. ERP/PDM	yy/mm/dd/hh/mm/	1000	~20sec.	++
3. ERP/SCM	yy/mm/dd/hh/mm/	500	~50sec.	−−
. . .	. . .			

FIG. 7C

703

SERVICE LIST	UPDATED DATE	AUTHENTICATED CAPACITY	REQUESTED PERFORMANCE	CREDIT SCORE
1. ERP/MRP	yy/mm/dd/hh/mm/	4000	~3sec.	AA
2. ERP/PDM	yy/mm/dd/hh/mm/	2000	~30sec.	AAA
3. ERP/SCM	yy/mm/dd/hh/mm/	500	~60sec.	A−
. . .	. . .			

FIG. 8


801
FILE SIMULATION HELP
LOAD
NETWORK
SERVER
DATA
. . .
802
803
FILE SIMULATION HELP
LOAD
NETWORK
SERVER
DATA
. . .
804
800
FILE SIMULATION HELP
INPUT URL
REQUESTED PERFORMANCE SPEC. : A
REQUESTED PERFORMANCE SPEC. : B
CONTROL PARAMETER: N
CONTROL PARAMETER: X
CONTROL PARAMETER: Y
CONVERGENCE CRITERIA
BestEffort
Converge ASAP
SYSTEM COMPONENT
ASP: 2a03
ASP: 2b08
IDC: GCTOKYO
IDC: GCSUNV